



Name _____

Practice: For use after Lesson 3.4, Algebra 2 with Trigonon

Algebra 2 GHP
Unit #11
WS #10**Composition of Functions**Evaluate each pair of functions for $x = 1, 0, -2, d$.

1. $f(x) = -2x, g(x) = x + 1$ _____

2. $f(x) = x^2, g(x) = -x$ _____

3. $f(x) = 3x^2 + 2x - 3, g(x) = 2x^2 - 1$ _____

Evaluate $g[f(2)], g[f(-1)],$ and $g[f(0)]$ for each pair of functions.

4. $f(x) = 2x, g(x) = x + 1$ _____

5. $f(x) = -3x, g(x) = x - 1$ _____

6. $f(x) = x^2, g(x) = -3x$ _____

7. $f(x) = 2x^2, g(x) = -x$ _____

8. $f(x) = 3x, g(x) = -2x$ _____

9. $f(x) = -4x, g(x) = 3x$ _____

Evaluate $f[g(x)]$ and $g[f(x)]$ for $x = -1, 0, 2, c$.

10. $f(x) = x^2, g(x) = x - 1$ _____

11. $f(x) = -3x^2, g(x) = -2x + 3$ _____

12. $f(x) = x^2 + 3x, g(x) = -x + 2$ _____

Find $(g \circ f)(x)$ and $(f \circ g)(x)$ for each pair of functions.

13. $f(x) = x^2, g(x) = 3x$ _____

14. $f(x) = 3x^2, g(x) = 2x$ _____

Application

15. **Economics** The function $g(x) = 0.6x$ will convert French francs to West German marks. The function $f(x) = 0.4x$ will convert West German marks to U.S. dollars. Find the value in U.S. dollars of 100 French francs. _____

MIXED PRACTICE

Determine whether the ordered pair is a solution of the equation.

16. $3x + y = -10; (5, -10)$ _____

17. $4 - 2y = 5x; (-1, \frac{9}{2})$ _____

Evaluate $g[f(3)], g[f(-2)],$ and $g[f(0)]$ for each pair of functions.

18. $f(x) = 4x, g(x) = x - 3$ _____

19. $f(x) = 2x^2, g(x) = 3x + 1$ _____